1288Rapid Dissemination of Universal Decolonization in Adult Intensive Care Units (ICUs) Reduces Healthcare-Associated (HA) Central Line Associated Bloodstream Infections (CLABSI) in over 100 Community Hospitals in a Single Healthcare System

ORAL ABSTRACTS

1288. Rapid Dissemination of Universal Decolonization in Adult Intensive Care Units (ICUs) Reduces Healthcare-Associated (HA) Central Line Associated Bloodstream Infections (CLABSI) in over 100 Community Hospitals in a Single Healthcare System

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Session: 173. CLABSI: Surveillance and Prevention
Saturday, October 11, 2014: 8:30 AM

Background. We conducted a 3 arm cluster randomized trial of three MRSA prevention strategies in 74 ICUs at 43 hospitals which demonstrated universal decolonization with chlorhexidine and mupirocin in adult ICUs resulted in a 44% reduction in risk of bloodstream infection due to all pathogens.(*N Engl J Med* 2013; 368:2255-2268) Implementing novel evidence based strategies across a large healthcare system presents challenges to scale to reach high compliance.

Methods. Starting in March 2013 HCA implemented universal decolonization in over 350 adult ICUs in over 160 acute care hospitals. Planning and deployment tactics occurred thru central coordination with corporate infection prevention using intranet available toolkit resources, operational and process measures from a common EHR system and coaching calls. Key stakeholders included leadership champions, healthcare providers, infection preventionists, pharmacists, IT&S and supply chain. Primary analysis was reduction in HAI CLABSI using National Healthcare Safety Network (NHSN) surveillance definitions excluding the 74 ICU hospitals in the original trial. We defined the pre-implementation period as beginning in January, 2011 and ending in December 2012, and the post-implementation period as beginning in July 2013 and ending in February 2014. The period of phase-in, between January and June 2013, was omitted from analysis.

We fit a Poisson Generalized Linear Mixed Model regression for the number of infections to assess differences between the pre- and post-implementation periods while accounting for hospital and unit level correlation. We assessed the possibility of trend over time, and adjusted for seasonal effect, and number of beds in the unit. The log total number of central lines was the offset.

Results. There was no evidence of trend over time in either the pre or post implementation period. After implementation, the estimated rate of CLABSI decreased by 31% ($p < .0001$, 95% confidence interval [16%,40%]). Adjusting for seasonality and number of beds minimally affected these results.

Conclusion. Universal decolonization of ICU patients was associated with significant decline in CLABSI across a large community hospital system confirming our original trial. Rapid implementation is reproducible in a learning healthcare system.

Disclosures. **J. Hickok**, Sage Products: Conducting a clinical trial (ABATE) for which contributed product is being provided to participating hospitals, Contributed Product; Molnlycke: Conducting a clinical trial (ABATE) for which contributed product is being provided to participating hospitals, Contributed product; AHRQ, CDC NIH: Grant Investigator, Grant recipient **J. Moody**, Sage Products: Conducting a clinical trial (ABATE) for which contributed product is being provided to participating hospitals, Contributed Product; Molnlycke: Conducting a clinical trial (ABATE) for which contributed product is being provided to participating hospitals, Contributed product; AHRQ, CDC, NIH: Grant Investigator, Grant recipient **K. Kleinman**, Sage Products: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed Product; Molnlycke: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed product **T. Avery**, Sage Products: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed Product; Molnlycke: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed product **S. S. Huang**, Sage Products: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed Product; Molnlycke: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed product **S. Bienvenu**, Sage Products: Conducting a clinical trial (ABATE) for which contributed product is being provided to participating hospitals, Contributed product; Molyncke: Conducting a clinical trial (ABATE) for which contributed product is being provided to participating hospitals, Contributed Product; AHRQ, CDC, NIH: Team member of Grant Investigator, Grant recipient **J. Perlin**, Sage Products: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed Product; Molnlycke: Conducting a clinical trial for which contributed product is being provided to participating hospitals, Contributed product; AHRQ, CDC, NIH: Grant Investigator, Grant recipient **E. Septimus**, Sage and Molnlycke: received product, provided product for ABATE study; AHRQ, CDC, NIH: Grant Investigator, Grant recipient

Open Forum Infectious Diseases 2014;1(S1):S1–65

DOI: 10.1093/ofid/ofu051